

REMARKS

Applicants have carefully reviewed the Office Action dated June 27, 2003, regarding the above-referenced patent application. Currently, claims 1-15, 17-22, 24-42, 44-48, 50-56 and 58-59 are pending in the application. Claims 1-15, 17-22, 24-42, 44-48, 50, 53-56 and 58-59 have been rejected, and claims 51 and 52 have been objected to. Claims 1, 24 and 31 have been amended with this paper. Applicants respectfully submit the above amendments to the specification and claims, as well as the following remarks, in view of the rejections.

In the Office Action, the drawings were objected to under 37 C.F.R. §1.83(a) for not showing every feature of the invention specified in the claims. Specifically, the Examiner argued that the braid, as claimed in claim 51, and the coil, as claimed in claim 52, are not shown in the drawings. Applicants respectfully traverse this objection to the drawings. Applicants direct the Examiner's attention to Applicant's Amendment mailed on April 15, 1999, (Paper No. 6) wherein Figure 5 was added to the specification along with additional language added to the written description supporting Figure 5. As can be seen from Figure 5 and the accompanying language in the specification on page 10, all elements of claims 51 and 52 are sufficiently shown in the drawings. A return postcard indicated that the drawings were received by the U.S. Patent and Trademark Office. A copy of Paper No. 6 and Figure 5, along with a copy of the return postcard, are enclosed for the Examiner's benefit. Applicants respectfully assert that no new matter was added by these amendments.

The specification was objected to for failing to provide proper antecedent basis for the claimed subject matter. Specifically, claims 14 and 41 recite a wire diameter range of 0.3-1.5 mils., but the specification describes a wire diameter range of 0.5-1.5 mils. Claims 14 and 41 remain in their original format as filed. Therefore, Applicants may rely on the content of the original claims in establishing a disclosure. See M.P.E.P. §608.01(l). The specification has been amended to reflect that which is disclosed in claims 14 and 41. Applicants assert that no new matter has been included with this amendment.

In the Office Action, claims 1, 2, 13, 19, 20, 24, 27, 31, 40, 46, 47, 50, 53-56, 58 and 59 were rejected under 35 U.S.C. §102(b) as being anticipated by JP 05-220225 in view of Samson (U.S. Patent No. 5,702,373). Applicants respectfully traverse this rejection, but in expediting examination of the application have amended claims 1, 24 and 31 to more precisely identify the invention. Specifically, claims 1, 24 and 31 have been amended to include the knit tubular

member is formed from a plurality of interlocking loops. JP 05-220225 simply fails to teach this aspect of the invention.

Due to the lack of a translation, Applicants forwarded the reference to their Japanese associate. An English language Abstract was provided by the associate and is included herein. The English language translation of the Abstract of JP 05-220225 seems to suggest a reinforcing layer 35 having a wire layer 35A tightly "knitted" on the base end side of the main body section 31 and a wire layer 35B coarsely "knitted" on the tip side of the main body section 31. See patent abstract. Applicants acknowledge the use of the term "knitted" in the English language translation of the Abstract of JP 05-220225, but assert that the term "knitted" used in the reference is not used in the same manner as Applicants define the term. Therefore, even though the English language translation of JP 05-220225 includes the term "knitted", the reference fails to teach the invention as Applicants have claimed. As the figures of JP 05-220-225 seem to illustrate, the reinforcing layer, although translated to be a "knitted" layer, is actually a braided or woven layer as defined throughout the prosecution history of the current application. Though Applicants will continue to address the reinforcing layer as a "knitted" layer in accordance with the English language translation throughout any communications with the Office, Applicants respectfully assert that the reinforcing layer taught in JP 05-220-225 is not a knitted layer as disclosed or claimed in the current application.

As can most easily be seen in Figures 4 and 5 of JP 05-220225, the reinforcing layer includes a plurality of wires wrapped in a helical pattern in opposing directions. This arrangement is consistent with a braided or woven layer. The pitch, or distance between windings, may be altered along the length of the shaft, as shown in Figure 5, in order to create a portion that is tightly "knitted" and a portion that is coarsely "knitted". In other words, the windings are not interlocking and may be slid along the length of the shaft to vary the density of windings in a particular section. Applicants respectfully assert that a knitted layer formed by a plurality of interlocking loops as claimed in the current application could not possess these characteristics. The plurality of interlocking loops prevents the wires from moving relative to one another and sliding along the length of the shaft. Therefore, the interlocking loops of the knitted tubular member act to retain the wires in an arrangement having a predetermined density. Applicants' Japanese associate further confirmed that there is no disclosure of a plurality of interlocking loops in the reference text.

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Applicants respectfully assert that JP 05-220225 fails to teach every element of the invention as claimed in claims 1, 24 and 31. Applicants firmly believe claims 1, 24, 31 and 54-56 are in condition for allowance. Claims 2, 13, 19 and 20 depend from claim 1 and contain significant additional elements, claim 27 depends from claim 24 and contains significant additional elements, and claims 40, 46, 47, 50, 53, 58 and 59 depend from claim 31 and contain significant additional elements. Applicants firmly believe that these claims also are in condition for allowance for at least the reasons stated above.

In the Office Action, claims 1-5, 13, 14, 18-20, 24-27, 31-33, 40, 41, 45-47, 50, 53-56, 58 and 59 were rejected under 35 U.S.C. 102(e) as being anticipated by Leoni (U.S. Patent No. 5,772,681). Applicants respectfully traverse this rejection.

Leoni teaches a dilation catheter having a balloon section. The balloon section has a reinforcement net preventing over-expansion of the balloon. The reinforcement net is made of metallic monofilaments, wherein there is no special bond between the monofilaments so that the filaments are moveable with respect to each other at the crossover points. Applicants respectfully assert that Leoni fails to teach that which is claimed in the current invention. Namely, Leoni fails to teach a knit tubular member formed by a plurality of interlocking loops. As stated above, if the reinforcement net of Leoni was made of a knit tubular member formed by a plurality of interlocking loops, it would cease to have filaments which are moveable with respect to each other at the crossover points. The interlocking loops prevent the wires from moving relative to each other, therefore creating a knit tubular member that retains its shape and is generally not radially expandable. This arrangement provides strength and flexibility to the elongate shaft of the current invention, wherein the reinforcement member of Leoni would fail to provide such characteristics to a catheter section. It can be demonstrated that the reinforcing net of Leoni and the knit tubular member as claimed in the current application provide different functions due to their distinct characteristics. Therefore, Applicants assert that Leoni fails to teach the elements of the presently claimed invention, namely a knit tubular member formed by a plurality of interlocking loops.

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The Applicants respectfully assert that claims 1, 24 and 31 contain at least one element not taught in Leoni. Therefore, they are believed to in condition for allowance. Claims 2-5, 13, 14, 18-20 and 54-56 depend from claim 1 and contain significant additional elements, claims 25-27 depend from claim 24 and contain significant additional elements, and claims 32, 33, 40, 41,

45-47, 50, 53, 58 and 59 depend from claim 31 and contain significant additional elements. Therefore, these claims are also believed to be in condition for allowance.

Claims 6-12, 15, 21, 28-30, 34-39, 42 and 48 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-220225 or Leoni and further in view of Andersen et al. (U.S. Patent No. 5,674,276). Applicants respectfully traverse this rejection. As stated above, neither JP 05-220225 nor Leoni teach the claimed invention and Andersen et al. fail to remedy the shortcomings of JP 05-220225 or Leoni. For the reasons stated above, Applicants believe the rejection should be withdrawn, asserting that the stated claims are in condition for allowance.

Claims 17, 22, 44 and 48 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-220225 or Leoni as applied to claims 54, 1 and 58 respectively above, and further in view of Jang et al. (U.S. Patent No. 4,898,591). Applicants respectfully traverse this rejection. As stated above, neither JP 05-220225 nor Leoni teach the claimed invention and Jang et al. fail to remedy the shortcomings of JP 05-220225 or Leoni. For the reasons stated above, Applicants believe the rejection should be withdrawn, asserting that the stated claims are in condition for a

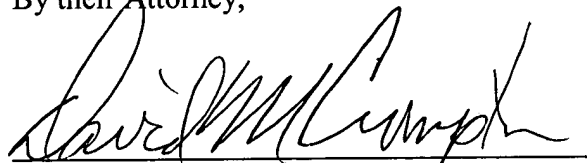
Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

Jill McFadden et al.

By their Attorney,

Date: 9/26/03


David M. Crompton, Reg. No. 36,772
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, MN 55403-2420
Telephone: (612) 677-9050
Facsimile: (612) 359-9349



PATENT ABSTRACTS OF JAPAN

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(71)Applicant : TERUMO CORP

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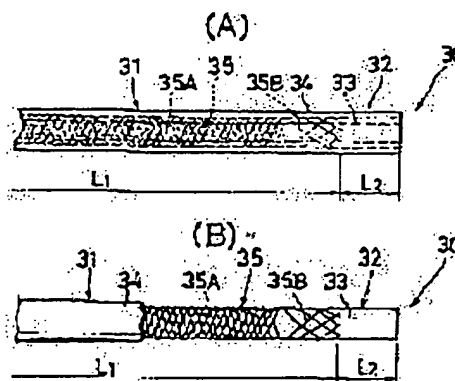
(72)Inventor : SUZUKI TATSUO
MATSUMOTO ATSUSHI

(54) CATHETER

(57)Abstract:

PURPOSE: To provide a catheter gradually changing the torsional rigidity of a main body section and a tip section, accelerating the responsiveness of the tip section against the rotation of the main body section, and capable of preventing the abrupt bending of the tip section against the main body section.

CONSTITUTION: A catheter 30 is constituted of an inner pipe section 33 from a base end to the tip and an outer pipe section 34 covering the inner pipe section 33, the catheter 30 has a tip section 32 and a main body section 31, a single-layer reinforcing layer 35 is inserted between the inner pipe section 33 and the outer pipe section 34 of the main body section 31, the tip section 32 has no reinforcing layer 35, and the reinforcing layer 35 is constituted of a wire layer 35A lightly knitted on the base end side of the main body section 31 and a wire layer 35B coarsely knitted on the tip side of the main body section 31.



LEGAL STATUS

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